Documentation sheet

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Title *Development of Matlab software modules for Surface Particle Image Tracking*

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Remarks

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Surface Particle Tracking, Oil flow visualization

Abstract

Based on recently suggested new approach to surface oil flow visualization, a correlation-based approach for Surface Particle Image Tracking has been developed as usable software to compute particle displacements from particle images of surface oil flow visualization. Three correlation methodologies have been implemented with a user customizable interrogation size and mesh for processing. The algorithm has been used to analyze data sets supplied by Boeing. The results show that the displacements can be obtained using this approach and can yield very useful data if proper care is taken to obtain oil-particle images.